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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/804,650	03/19/2004	Kurt Schwarzwald	63,799-0057	7763

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EXAMINER

HUSON, MONICA ANNE

ART UNIT	PAPER NUMBER
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1732

DATE MAILED: 07/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/804,650	Applicant(s) SCHWARZWALDER ET AL.	
	Examiner Monica A. Huson	Art Unit 1732	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 May 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 and 21-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 and 21-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 November 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This office action is in response to the paper filed 2 May 2006.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –
(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claims 1, 3-7, 23, and 25 are rejected under 35 U.S.C. 102(a) as being anticipated by Tilton et al. (U.S. Patent 6,572,723). Regarding Claim 1, Tilton et al., hereafter "Tilton," show that it is known to carry out a method of forming a polymeric component (Abstract) comprising providing a primary extrusion (Column 2, lines 13-14); zone heating at least one portion of the primary extrusion to create a molten zone within the at least one portion, leaving surrounding portions of the primary extrusion in a solid state (Column 2, lines 1-11, 19-29); and compressing the at least one portion between a pressing unit and a die cavity until the at least one portion takes the shape of the pressing unit and die cavity and forms a solid state section molded feature integral with the primary extrusion (Column 2, lines 30-36, 44-45).

Regarding Claim 3, Tilton shows the process as claimed as discussed in the rejection of Claim 1 above, including a method further comprising aligning the zone heating and compression steps in an off-line operation; and forming the section molded portion in the off-line operation (Figures 3a-3d).

Regarding Claim 4, Tilton shows the process as claimed as discussed in the rejection of Claim 1 above, including a method further comprising aligning the heating, cooling, zone heating and compressing steps in an in-line

operation; and forming the polymeric component in the in-line operation (Figures 1a-1d).

Regarding Claim 5, Tilton shows the process as claimed as discussed in the rejection of Claim 1 above, including a method further comprising applying zone heating of via conduction heating (Column 2, lines 37-55; It is noted that heat will be conducted from the plates to the molded article).

Regarding Claim 6, Tilton shows the process as claimed as discussed in the rejection of Claim 1 above, including a method further comprising providing a section mold unit having at least one pressing unit and at least one die cavity for forming a section molded feature integral to the primary extrusion (Figure 1c, element 28, 30; Column 8, lines 7-9).

Regarding Claim 7, Tilton shows the process as claimed as discussed in the rejection of Claim 6 above, including a method comprising providing the die cavity to be comprised of a split die (Figure 1c, elements 28, 30; It is noted that the shape of the split die is not believed to have an effect on the method steps.) and providing the pressing unit to be comprised of an upper mandrel (Figure 1c, element 28; It is noted that the shape of the pressing unit is not believed to have an effect on the method steps.); and raising the mandrel and separating the split die to release the polymeric component (Column 6, lines 27-28).

Regarding Claim 23, Tilton shows that it is known to carry out a method of forming a polymeric component (Abstract) comprising providing a primary extrusion in a solid state, the primary extrusion formed of a polymeric material (Column 2, lines 13-14); zone heating at least one portion of the primary extrusion to create a molten zone of the polymeric material within the at least one portion, leaving surrounding portions of the polymeric material of the primary extrusion in a solid state (Column 2, lines 1-11, 19-29); and compressing the molten zone, after formation thereof, between a pressing unit and a die cavity until the molten zone takes the shape of the pressing unit and

die cavity and forms a solid state section molded feature integral with the primary extrusion (Column 2, lines 30-36; 44-45; Column 6, lines 22-29).

Regarding Claim 25, Tilton shows the process as claimed as discussed in the rejection of Claim 23 above, including a method wherein the pressing unit is at a temperature below the temperature of the molten zone during the step of compressing the molten zone (Column 5, lines 53-56).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tilton, in view of Weaver et al. (U.S. Patent 4,379,802).

Regarding Claim 2, Tilton shows the process as claimed as discussed in the rejection of Claim 1 above, but he does not explicitly show forming the primary extrusion. Weaver shows a method comprising heating a polymeric compound and forcing the heated compound through an orifice to form a heated extrusion; and cooling the heated extrusion to form a primary extrusion in a solid state (Column 11, lines 49-51). Weaver and Tilton are combinable because they are concerned with a similar technical field, namely, methods of molding composite articles. It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use Weaver's extrusion step as that which forms Tilton's primary extrusion in order to properly mold a primary extrusion into the shape that is desired for certain end-use specifications.

Regarding Claim 8, Tilton shows the process as claimed as discussed in

the rejection of Claim 1 above, but he does not show clamping the solid state portion of the extrusion prior to its compression. Weaver shows a method further comprising clamping the solid state portion of the primary extrusion to stabilize the primary layer prior to compressing the molten zone (Column 11, lines 36-39). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use Weaver's clamping step during Tilton's molding process in order to avoid movement of the primary extrusion during the compression process.

Claims 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tilton.

Regarding Claim 9, Tilton shows the process as claimed as discussed in the rejection of Claim 1 above, including zone heating a portion along the length of primary extrusion to create a molten zone, leaving the surrounding portions of the primary extrusion in a solid state (Column 2, lines 1-11, 19-29); providing section mold having a die cavity and pressing unit, and aligning the portion with a molten zone with a corresponding die cavity of the section mold (Figure 1c, elements 28, 30; Column 5, lines 51-59; Column 6, lines 1-4; Column 8, lines 7-9). Tilton does not show heating a plurality of portions to create a plurality of molten zones, or a section mold having a plurality of die cavities and pressing units. However, it is known that duplication of parts has no patentable significance unless a new and unexpected result is produced (See MPEP 2144.04 VI (B)). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use a section mold having a plurality of die cavities and pressing units and to heat a plurality of portions to create a plurality of molten zones during Tilton's molding process in order to produce a plurality of articles in one process cycle.

Regarding Claim 10, Tilton shows the process as claimed as discussed in the rejection of Claim 6 above, including providing a section mold unit having a

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die cavity and pressing unit (Figure 1c, elements 28, 30; Column 8, lines 7-9). Tilton does not show providing a section mold having a plurality of identical die cavities and pressing units. However, it is known that duplication of parts has no patentable significance unless a new and unexpected result is produced (See MPEP 2144.04 VI (B)). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use a section mold having a plurality of identical die cavities and pressing units during Tilton's molding process in order to produce a plurality of identical articles in one process cycle.

Regarding Claim 11, Tilton shows the process as claimed as discussed in the rejection of Claim 6 above, including providing a section mold having a die cavity and pressing unit (Figure 1c, elements 28, 30; Column 8, lines 7-9; It is noted that the shape of the die cavity and pressing unit is not believed to have an effect on the method steps.). Tilton does not show providing a section mold having a plurality of die cavities and pressing units. However, it is known that duplication of parts has no patentable significance unless a new and unexpected result is produced (See MPEP 2144.04 VI (B)). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use a section mold having a plurality of die cavities and pressing units during Tilton's molding process in order to produce a plurality of articles in one process cycle.

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tilton, in view of Hubert et al. (U.S. Patent 3,752,060). Tilton shows the process as claimed as discussed in the rejection of Claim 1 above, including zone heating a first portion of the primary extrusion to create a molten zone within the first portion, while leaving the remaining portion of the primary extrusion in a solid state (Column 2, lines 1-11, 19-29); providing a section mold having a die cavity and pressing unit (Figure 1c, elements 28, 30; Column

8, lines 7-9); aligning the molten zone of the first portion with the die cavity (Figures 1a-1d); compressing the first portion between the pressing unit and die cavity until the first portion takes the shape defined by the die cavity and pressing unit and forms a solid state integral with the primary extrusion (Column 2, lines 30-36, 44-45). Tilton does not show advancing the primary extrusion to and zone heating a second portion. Hubert et al., hereafter "Hubert," show that it is known to carry out a method including zone heating, after compression of the first portion, a second portion of the primary extrusion to create a molten zone within the second portion, leaving the surrounding portion of the primary extrusion in a solid state; aligning the molten zone of the second portion with the die cavity; and compressing, after compressing the first portion, the second portion between the pressing unit and the die cavity until the second portion takes the shape defined by the die cavity and the pressing unit and forms a solid state integral with the primary extrusion (Column 5, lines 51-68; Column 6, lines 1-22, 23-48). Hubert and Tilton are combinable because they are concerned with a similar technical field, namely, methods of compression molding sheet-like articles. It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use Hubert's second-portion compression step during Tilton's molding method in order to compress the article at varying pressures over several compression steps within one molding cycle.

Claims 21-22, 24, and 26-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tilton, in view of Franz (U.S. Patent 4,539,252).

Regarding Claim 21, Tilton shows the process as claimed as discussed in the rejection of Claim 1 above, but he does not show a method wherein the zone heating unit is separate from the section mold unit. Franz shows that it is known to carry out a method wherein the step of zone heating is accomplished with a zone heating unit and the step of compressing is

accomplished with a section mold unit and the zone heating unit is separate from the section mold unit (Figure 2b, elements 12, 13, 14). Franz and Tilton are combinable because they are concerned with a similar technical field, namely, methods of molding sheet-like articles. It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use Franz's separate heating element during Tilton's molding process in order to facilitate the removal or exchange of the heating element when the heating element is broken or needs to be upgraded.

Regarding Claim 22, Tilton shows the process as claimed as discussed in the rejection of Claim 21 above, including a method wherein, after zone heating, the primary extrusion is advanced from the zone heating unit to the section mold unit and the molten zone is aligned between a pressing unit and a die cavity of the section mold unit (Figure 1c, elements 28, 30; Figures 1a-1d; Column 8, lines 7-9), meeting applicant's claim.

Regarding Claim 24, Tilton shows the process as claimed as discussed in the rejection of Claim 23 above, but he does not show a method wherein the zone heating unit is separate from the section mold unit. Franz shows that it is known to carry out a method wherein the molten zone is created by a heating element that is separate from the pressing unit and die cavity (Figure 2b, elements 12, 13, 14). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use Franz's separate heating element during Tilton's molding process in order to facilitate the removal or exchange of the heating element when the heating element is broken or needs to be upgraded.

Regarding Claim 26, Tilton shows the process as claimed as discussed in the rejection of Claim 24 above, including a method wherein the pressing unit is at a temperature below the temperature of the molten zone during the step of compressing the molten zone (Column 5, lines 53-56). Tilton does not show a method wherein the zone heating unit is separate from the section mold unit.

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Franz shows that it is known to carry out a method wherein the molten zone is created by a heating element that is separate from the pressing unit and die cavity (Figure 2b, elements 12, 13, 14). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use Franz's separate heating element during Tilton's molding process in order to facilitate the removal or exchange of the heating element when the heating element is broken or needs to be upgraded.

Regarding Claim 27, Tilton shows the process as claimed as discussed in the rejection of Claim 26 above, including a method wherein, after zone heating, the primary extrusion is advanced from the zone heating unit to the section mold unit and the molten zone is aligned between a pressing unit and a die cavity of the section mold unit (Figure 1c, elements 28, 30; Figures 1a-1d; Column 8, lines 7-9), meeting applicant's claim.

Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tilton and Franz, further in view of Weaver. Tilton shows the process as claimed as discussed in the rejection of Claim 27 above, including showing aligning the heating, cooling, zone heating, and compression steps in an in-line operation; and forming the polymeric component in the in-line operation, wherein the molten zone is created by locating a heating element within close proximity of a surface of the primary extrusion (Figures 1a-1d; Column 2, lines 13-14; Column 5, lines 24-65). Tilton does not explicitly show forming the primary extrusion. Weaver shows a method comprising heating a polymeric compound and forcing the heated compound through an orifice to form a heated extrusion; and cooling the heated extrusion to form a primary extrusion in a solid state (Column 11, lines 49-51). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use Weaver's extrusion step as that which forms Tilton's primary extrusion in order to properly mold a primary extrusion into the shape that is desired for

certain end-use specifications.

Response to Arguments

Applicant's arguments, see the paper filed 2 May 2006, with respect to the rejection(s) of claim(s) 1-12 under Weaver have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Tilton.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Monica A. Huson whose telephone number is 571-272-1198. The examiner can normally be reached on Monday-Friday 6:45am-3:15pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Johnson can be reached on 571-272-1176. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Monica A Huson

July 19, 2006